

### **Section 112 rejection of Claims 1-22**

Claims 1-22 were rejected under 35 USC 112, second paragraph. The Applicant respectfully traverses the rejection.

#### **Claims 1, 18, 21 and 22**

The Office Action rejected claims 1, 18, 21 and 22 for the use of the phrase “substantially continuously” as allegedly being confusing. The Applicant respectfully disagrees.

MPEP § 2173.05(b) states that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. § 112, second paragraph. *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). The proper test for determining the acceptability of the claim language is when a term of degree is present, determine whether a standard is disclosed or whether one of ordinary skill in the art would be apprised of the scope of the claim.

Furthermore, the MPEP has approved the use of the term “substantially” in claim language. MPEP § 2173(b)(d) states that the term “substantially” is often used in conjunction with another term to describe a particular characteristic of the claimed invention. Claims 1, 18, 21 and 22 recites the term “substantially” in conjunction with the terms “continuously” to describe the operation of the transistor switch and the pull-down mirror path. If the qualifier is not permitted, there are conceivable short periods where the current would not be continuous, and therefore the claimed invention might not be literally infringed. Using “substantially” takes into account such a period of operation. Thus, the term “substantially continuously’ is a definite term.

It is respectfully submitted that claim 1, 18, 21 and 22 are definite, and the rejection be withdrawn.

#### **Claim 13**

The pull-down mirror path can clearly comprise a pull-up amplifier as detailed in the Specification at page 6, lines 5-8 which teach the mirror path can comprise “a complementary switch and a pulling amplifier, e.g., a pull-down

amplifier for a source current switching circuit, or a pull-up amplifier for a sink current switch circuit."

**Claim 18**

Lines 1 and 10 clearly respectively set out the purpose of the claim and the components that execute the purpose. Line 1 recites in the preamble a method of "reducing charge injection" and line 10 recites components that operate to "reduce charge injection".

**Claims 21 and 22**

The Office Action alleges "continuously receives said current flowing from said current source" is misleading. The Applicant respectfully disagrees.

Current is substantially continuously received by a load from a current source after the step of opening a transistor switch connecting the current source to the load. The claim must be read as a whole, not as individual steps taken out of context of the entire method.

**Alleged Obviousness of claims 1-20 in view of Harston**

In the Office Action, claims 1-20 were rejected under 35 U.S.C. §103(a) as allegedly being obvious by US Patent No. 5,343,196 to Harston ("Harston"). The Applicant respectfully traverses the rejection as follows.

Claims 1-20 of the present application recite, *inter alia*, a transistor switch and a pull-down mirror path that operate to substantially continuously reduce charge injection flowing to a load.

Harston teaches a method of reducing the amount of current switched to a reference line so as to reduce the overall power consumption of a digital to analog converter (DAC). To achieve this, three transistors are employed. One MOS transistor acts as a current source. The two other transistors act alternatively to direct current to either the load or ground (Harston, col. 1, line 41-42).

Harston fails to disclose a transistor switch and a pull-down mirror path operating to substantially continuously reduce charge injection flowing to a

load. Harston's alternative parallel path flows current to ground, NOT to the capacitor 10pF and resistor at the OUTPUT. As seen in Harston's Fig. 3, the alternative path for the current coming from MP1 is to analog ground AGND, NOT to a load. There is NO mirror path since the alternate path goes to ground, NOT to OUTPUT (Harston, Fig. 3). MP3 is NOT a mirror path since the current does NOT flow to OUTPUT substantially continuously. If the current takes the MP3 path, NO CURRENT would flow to load OUTPUT (Harston, Fig. 3), since flowing to ground.

Accordingly, for at least all the above reasons, claims 1-20 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

### **Response to Arguments**

The Examiner asserts that when Harston's transistor switch MP2 is turned off, resistor 37.5 will help discharge load 10pf. Therefore, the charge injection will no longer be flowing to the load. The Applicant respectfully disagrees.

According to the Examiner, switch MP2 is turned off. The Applicant agrees with the Examiner's analysis of Harston related to the switching of MP2. Switching off switch MP2 would not allow a continuous flow of current to the load from the current source, as claimed by claims 1-20. However, Harston does NOT teach a reduction of charge injection as claimed.

The Examiner asserts that a continuous flow of current to the load is not recited in the independent claims and that therefore the claims are not patentable.

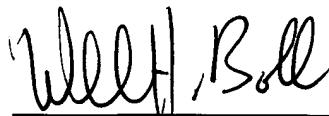
Claims 1-20 of the present application recite, *inter alia*, a transistor switch and a pull-down mirror path that operate to substantially continuously reduce charge injection flowing to a load. The claim limitation is within the independent claims, contrary to the examiner's assertion.

**Conclusion**

For at least all the above reasons, claims 1-22 are patentable over the prior art of record.

All rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,  
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